

Claims

1. A capsule extraction device (16, 32, 56) comprising
- 5 - a first part (2, 30, 50),
- a second part (3, 34) that can be moved relative to the first part,
- a housing (4, 35) for the capsule and defining, in the closed position of the movable part against the fixed part, an extraction position of the capsule along an axis (25) in said housing,
- 10 - an insertion and positioning part comprising means (6, 7, 31) of guiding the capsule arranged so as to insert the capsule by gravity and position said capsule in an intermediate position,
- a drink pouring system (19, 53),
characterized in that
- 20 the second movable part (3, 34) is configured to move the capsule (16, 32, 56) from the intermediate position into the extraction position when the device is closed.
- 25 2. The device as claimed in claim 1, characterized in that it comprises stopping means (20) configured to keep the capsule (16) in the intermediate position along an axis (26) offset relative to the axis (25) of the capsule in the extraction position in the housing (4).
- 30 3. The device as claimed in claim 2, characterized in that the second movable part (3) is configured to force the capsule (16) to go past the stopping means (20) when the capsule travels from its
- 35 intermediate position to its extraction position.

4. The device as claimed in claim 1, characterized in that it comprises stopping means (31, 51, 52, 57) configured to keep the capsule (32, 56) in the intermediate position along an axis substantially coaxial with the axis (25) of the housing.
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5. The device as claimed in claim 4, characterized in that the second movable part (34) acts on the opening of the stopping means (31) to move them aside when the capsule travels from its intermediate position to its extraction position.
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6. The device as claimed in any one of the preceding claims, characterized in that the first part (2, 30) is fixed and comprises a substantially horizontal guide body (14) to guide in translation the second movable part (3, 34) toward the first fixed part (2, 30).
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7. The device as claimed in claim 6, characterized in that the part for inserting and positioning the capsule is placed in front of the guide body (14) and comprises two guidance means (6, 7, 31).
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8. The device as claimed in claim 5, characterized in that the guidance means (31) are pivoting and form or comprise stopping means arranged to immobilize the capsule (32) in an intermediate position when the second movable part (34) is in the open position allowing the insertion of a capsule and to release the capsule when the second movable part (34) is in the closed position; in order to allow the capsule to move from this intermediate position to the extraction position and to allow said capsule to be released when the second movable part (34) is reopened.
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9. The device as claimed in claim 1, characterized in that it comprises, in front of the guide body

(31), a retractable stop (51), placed beneath the movable part.

- 5 10. The device as claimed in any one of claims 1 to 9, characterized in that it comprises an extraction plate (30, 55) toward which the second movable part (3, 34) moves the capsule to the extraction position.
- 10 11. The device as claimed in any one of claims 1 to 10, characterized in that the second movable part (3, 34) is moved by means (8) ensuring the movement to the open and closed position.
- 15 12. The device as claimed in claim 11, characterized in that the means (8) ensuring the movement are a system of rods (9, 10, 11, 12, 18).
- 20 13. The device as claimed in any one of claims 1 to 12, characterized in that the reopening of the second movable part (3, 34) allows the capsule to fall by gravitation.
- 25 14. The device as claimed in claim 13, characterized in that the capsule is guided in its fall by the guidance means (6, 7, 31).
- 30 15. A coffee machine comprising the device as claimed in any one of claims 1 to 14, characterized in that the machine comprises, in addition, a water tank, a water pipe, a pump for moving the water, means of heating the water and a water outlet in the movable part of the device.